Decibel Therapeutics Reports Positive Data from Interim Analysis of Ongoing Phase 1b Clinical Trial of DB-020 in Patients Receiving Cisplatin Chemotherapy

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- 87% of patients who experienced ototoxicity in their placebo-treated ear were protected from ototoxicity in their DB-020-treated ear –

- Data support continued development of DB-020 as a potential therapy to protect against hearing loss in patients receiving cisplatin chemotherapy for cancer –

- Management will review results during a webcast today at 8:00 a.m. EDT -

BOSTON, June 28, 2022 (GLOBE NEWSWIRE) -- Decibel Therapeutics (Nasdaq: DBTX), a clinical-stage biotechnology company dedicated to discovering and developing transformative treatments to restore and improve hearing and balance, today reported positive top-line results from an interim analysis of its ongoing Phase 1b clinical trial of DB-020, a novel, proprietary formulation of sodium thiosulfate (STS) designed to protect against hearing loss in cancer patients receiving cisplatin chemotherapy. Cisplatin, one of the most commonly used chemotherapeutic agents, has severe dose-limiting side effects, including ototoxicity, which leads to permanent hearing loss in many patients. There are no approved therapies to prevent or treat cisplatin-induced ototoxicity.

Patients enrolled in the Phase 1b clinical trial were randomized to receive one of two doses of DB-020 in one ear while the contralateral ear received placebo, enabling each patient to serve as their own control. Patients were administered DB-020 and placebo up to three hours prior to each cisplatin infusion. Consistent with the results of a Phase 1 clinical trial of DB-020 previously completed by the Company in healthy volunteers, data from the interim analysis demonstrated that DB-020 was well tolerated, with adverse events generally mild to moderate. In the data from the interim analysis, 88% of patients experienced ototoxicity in their placebo-treated ear, and of these patients, 87% were partially or completely protected from ototoxicity in their DB-020-treated ears.

“These data support the approach and rationale for DB-020 and represent an important step forward in the development of DB-020 for patients receiving cisplatin chemotherapy. We are tremendously encouraged by the favorable safety profile and protection against ototoxicity we have observed in the trial as of the interim analysis,” said John Lee, Chief Development Officer of Decibel. “These promising data support continued development of DB-020 to prevent or minimize cisplatin-induced hearing loss, an irreversible condition for which there are currently no available treatments.”

The interim analysis includes data collected as of February 4, 2022 from 19 cisplatin-naïve cancer patients being treated with high doses of cisplatin every 21 or 28 days. Of the 19 patients in the interim analysis, 17 patients had evaluable audiograms at baseline and after being dosed with DB-020 in one ear and placebo in the contralateral ear in conjunction with their prescribed infusion of cisplatin chemotherapy. Ototoxicity was defined according to the American Speech-Language-Hearing-Association (ASHA) criteria for significant ototoxic change.

Key findings:

- DB-020 was generally well tolerated, with no significant safety issues observed.
- DB-020, administered prior to cisplatin, had no apparent effect on systemic cisplatin levels.
- 13 of 17 (76.5%) patients experienced cisplatin-induced ototoxicity in the placebo ear after the first cycle of cisplatin; 15 of 17 (88.2%) patients experienced cisplatin-induced ototoxicity in the placebo ear by the last evaluable test.
    - Placebo-treated ears lost approximately 30dB on average from baseline in high frequencies, shifting patients from normal or slight hearing loss to moderate hearing loss (two hearing loss categories) on average.
- In the 15 patients who experienced ototoxicity in the placebo ear by the last evaluable test, DB-020 protected 13 (87%) from ototoxicity in their DB-020-treated ear.
    - 8 of 15 (53.3%) were completely protected, and 5 of 15 (33.3%) were partially protected. (Complete protection was defined as no change in hearing from baseline in the ear that received DB-020 according to the ASHA ototoxicity criteria in the clinically assessed range.)
    - Ears treated with DB-020 lost approximately 8dB on average from baseline.
- DB-020 reduced cisplatin-induced loss of speech audibility by 80% as measured by the Speech Intelligibility Index, suggesting treatment with DB-020 may reduce the risk of needing assistive hearing devices after receiving cisplatin.

“Cisplatin remains an important chemotherapy for the treatment of multiple cancer types, both as a single agent and in combination therapy, and is used routinely in my patients,” said Dr. Danny Rischin, Director of the Division of Cancer Medicine and Head of the Department of Medical Oncology at Peter MacCallum Cancer Centre, Melbourne, Australia. “Administration of DB-020 was generally well tolerated, and did not appear to alter systemic cisplatin levels, reducing concern of impacting the chemotherapeutic benefits of cisplatin on cancer management.”

“Decibel’s trial underscores the magnitude of hearing loss experienced by cisplatin-naïve cancer patients receiving cisplatin chemotherapy even after a single cycle of cisplatin,” said Dr. Ben Panizza, Director of the Queensland Head and Neck Cancer Centre, Brisbane, Australia. “Decibel’s interim analysis provides evidence that DB-020 has exciting potential to prevent cisplatin-induced hearing loss and we look forward to continuing to evaluate

the effectiveness of DB-020."

"We believe these positive data showcase the integrated capabilities that Decibel has implemented to develop innovative therapeutics for conditions of the inner ear. We look forward to reporting additional data from the interim analysis of our ongoing clinical trial of DB-020 at an upcoming medical conference, as we continue to advance our broader pipeline, focused on creating a world of connection for people with hearing and balance disorders," said Laurence Reid, Ph.D., Chief Executive Officer of Decibel.

Webcast and Conference Call
Decibel management will host a webcast regarding these interim analysis results today, Tuesday, June 28, 2022 at 8:00 a.m. EDT. The live webcast may be accessed online.

A replay of the webcast will be available online in the investor relations section of the Decibel website at www.decibeltx.com and will be archived there for 90 days.

About the Phase 1b Clinical Trial
The Phase 1b clinical trial of DB-020 is an ongoing, randomized, double-blind, placebo-controlled, multicenter trial designed to determine safety and tolerability of transtympanic injections of DB-020 in cancer patients receiving high doses of cisplatin. Audiometric measurements are made at the baseline before the first cisplatin infusion, before each subsequent cycle of cisplatin, and at the end of treatment in order to assess cisplatin-induced ototoxicity. ASHA criteria for significant ototoxic change are defined as either a ≥20 decibel (dB) decrease at any one test frequency, ≥10 dB decrease at any two adjacent frequencies, or loss of response at three consecutive frequencies where responses were previously obtained. Ototoxicity is evaluated from baseline to post-cisplatin administration timepoints in each ear and comparative ototoxicity measurements are made between the ears dosed with DB-020 and placebo in each patient. Partial protection is defined using ASHA Ototoxicity Criteria being applied to between ear changes.

About Decibel Therapeutics
Decibel Therapeutics is a clinical-stage biotechnology company dedicated to discovering and developing transformative treatments to restore and improve hearing and balance, one of the largest areas of unmet need in medicine. Decibel has built a proprietary platform that integrates single-cell genomics and bioinformatic analyses, precision gene therapy technologies and expertise in inner ear biology. Decibel is leveraging its platform to advance gene therapies designed to selectively replace genes for the treatment of congenital, monogenic hearing loss and to regenerate inner ear hair cells for the treatment of acquired hearing and balance disorders. Decibel's pipeline, including its lead gene therapy program, DB-OTO, to treat congenital, monogenic hearing loss, is designed to deliver on our vision of creating a world of connection for people with hearing and balance disorders. For more information about Decibel Therapeutics, please visit www.decibeltx.com or follow us on Twitter.

About DB-020
DB-020 is a proprietary formulation of sodium thiosulfate (STS) optimized for local delivery to the ear and is being investigated for its potential to protect against cisplatin-induced hearing loss without impacting the beneficial effect of cisplatin. DB-020 is designed to achieve high cochlear concentrations of STS following a local injection through the ear drum, or transtympanically, into the middle ear. Transtympanic injection is a brief, minimally invasive, routine, office-based procedure performed by ENTs and is generally well-tolerated. A randomized, double-blind, placebo-controlled Phase 1 clinical trial of DB-020 in normal healthy volunteers was completed in 2019. A randomized, double-blind, placebo-controlled, multicenter Phase 1b clinical trial of DB-020 in patients undergoing treatment with cisplatin is ongoing. For more information on the study, visit https://clinicaltrials.gov/ct2/show/NCT04262336

Forward-Looking Statements
This press release contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, contained in this press release, including statements regarding Decibel's strategy, future operations, prospects, plans, objectives of management, the therapeutic potential for Decibel's product candidates and preclinical programs constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. The words "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "might," "objective," "ongoing," "plan," "predict," "project," "potential," "should," or "would," or the negative of these terms, or other comparable terminology are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Decibel may not actually achieve the plans, intentions or expectations disclosed in these forward-looking statements, and you should not place undue reliance on these forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in these forward-looking statements as a result of various important factors, including: uncertainties inherent in the identification and development of product candidates, including the conduct of research activities and the initiation and completion of preclinical studies and clinical trials, the timing of and Decibel's ability to submit and obtain approval to initiate clinical development of its program candidates, whether interim data from a clinical trial will be predictive of the results of the trial and future clinical trials, whether Decibel's cash resources are sufficient to fund its foreseeable and unforeseeable operating expenses and capital expenditure requirements, uncertainties related to the impact of the COVID-19 pandemic on Decibel's business and operations, as well as the risks and uncertainties identified in Decibel's filings with the Securities and Exchange Commission (SEC), including those risks detailed under the caption "Risk Factors" in Decibel's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2022 and in other filings Decibel may make with the SEC. In addition, the forward-looking statements included in this press release represent Decibel's views as of the date of this press release. Decibel anticipates that subsequent events and developments will cause its views to change. However, while Decibel may elect to update these forward-looking statements at some point in the future, it specifically disclaims any obligation to do so. These forward-looking statements should not be relied upon as representing Decibel's views as of any date subsequent to the date of this press release.

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